

Section 923—Electrical Conduit

923.1 General Description

This section includes the requirements for metallic, nonmetallic, and flexible electrical conduit.

923.1.01 Related References

A. Standard Specifications

General Provisions 101 through 150.

B. Referenced Documents

National Electrical Code

ANSI C-80.1

ASTM A 90

Federal Specification WW-C-540a

Federal Specification W-C-1094

American National Standards Institute (ANSI) Specification C-80.1

Underwriter's Laboratories (UL) 651

National Electrical Manufacturers Association (NEMA) Standard TC 14, Type HW

923.2 Materials

923.2.01 Metallic Conduit

A. Requirements

1. Use metallic conduit that meets the requirements of and is used according to the latest edition of the National Electrical Code.
 - a. Check the Plans or Project Proposal for the type of conduit allowed.
 - b. Ensure each section of conduit shows approval by the Underwriter's Laboratories, Inc. (UL).
2. Rigid Steel Conduit

Ensure that rigid steel conduit, elbows, and couplings meet ANSI C-80.1.

Use conduit protected by a uniform metallic zinc coating on both the exterior and interior surfaces.

 - a. Coat the conduit and coupling with a minimum coating of 1.24 oz./ft² (378 g/m²), total of both surfaces.
 - b. Determine the weight of the zinc coating using either ASTM A 90, or, if the Engineer elects, a magnetic or electromagnetic thickness gage to measure the coating thickness.
3. Rigid Aluminum Conduit

Ensure that rigid aluminum conduit, elbows, and couplings meet Federal Specification WW-C-540a.

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

General Provisions 101 through 150.

D. Materials Warranty

General Provisions 101 through 150.

923.2.02 Nonmetallic Conduit

A. Requirements

1. Polyvinyl Chloride (PVC) Conduit

Use unplasticized PVC conduit that meets the requirements of UL 651.

 - a. Use Type I conduit only when encased in concrete. UL 651 refers to Type I as Type EB.

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- b. Use Type II conduit for direct burial. Use Schedule 40 (heavy wall), unplasticized PVC conduit that meets the requirements of Federal Specification W-C-1094, unless otherwise specified.
2. Fiberglass Reinforced Epoxy (FRE) Conduit
Use FRE conduit and fittings that meet the requirements of NEMA Standard TC 14, Type HW.

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

General Provisions 101 through 150.

D. Materials Warranty

General Provisions 101 through 150.

923.2.03 Flexible Conduit

A. Requirements

1. Use flexible conduit with a galvanized steel core and a UV-resistant PVC cover.
2. Use liquid-tight conduit with a continuous copper ground.
3. Use conduit that meets the requirements of Article 351 of the National Electrical Code.

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

General Provisions 101 through 150.

D. Materials Warranty

General Provisions 101 through 150.